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The Economic Life of the Dorobo

By G. W. B. Huntingford, B. Sc.

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1. The Economic Framework [1]

The country inhabited by the Dorobo consists of the northern part of the Tindiret Forest, and lies just north of the equator, extending northwards to about lat. 0°12', the western and eastern boundaries being long. 35°17' and 35°32' respectively. This area is mostly covered by dense forest of the deciduous type, and has an average altitude of about 8300 feet above sea-level, the northern block being in effect a table-land formed by the 8000 ft. contour. From it on the north and west a series of parallel ridges or spurs runs down towards the Nandi Land Unit [2], which is five miles distant from the nearest Dorobo settlement and below 7000 ft. in altitude, that part of south-east Nandi with which the Dorobo have contacts ranging from 6300 to 6800 ft. On the south there is a more precipitous slope to the Kipkurere valley, whence there is a rise to be crossed before the river Meteitei is reached. The only river of any size in the forest is the Kipkurere, "the hollow river", in allusion to its deep valley, which in wet weather rises from Lake Narasha near Timboroa. It crosses the southern part of the Dorobo forest through a valley nearly 1000 ft. deep, and with its numerous small tributaries forms the water supply of this part of the forest.

[1] Cf. The Social Institutions of the Dorobo, Anthropos 44. 1951. pp. 1-48, and The Political Organization of the Dorobo, Anthropos 49. 1954. pp. 123-148.

[2] Native Land Unit is the term now used officially in place of the old Native Reserve; but for the sake of clearness I shall continue to refer to the Nandi Land Unit as the Nandi Reserve or the Reserve.

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This area is a gazetted Forest Reserve, and the official boundary, marked by a broad line where the bush and trees have been cut, runs some distance outside the actual area of trees; this boundary line is kept clear by the Forest Department, for it acts in some measure as a firebreak. It is also the upper boundary of a block of European farms which occupy the land between the forest and the Nandi Reserve. On this strip of open ground between the trees and the farms most of the Dorobo now live, and it is on these farms that some of them work[8].

The forest itself is bordered in many places by a narrow belt of acacia thorn (acacia robusta, the flat-topped thorn-tree), as is often the case in western Kenya. Between the thorn and the forest are glades (*lovsia*) affording open spaces concealed from the outside world. The forest is evergreen "high forest", the trees, many of them 100 ft. and more in height, growing close together so that the branches and foliage which are mostly at the top form a crown or canopy that shades the ground from the sun. At ground level the space between the trees is largely covered with thick, tough undergrowth and giant thistles, up to a height of more than six feet, which make it impossible to travel except along a path. The rainfall is heavy and mists are frequent; in the dry weather there is occasional hour-frost in open ground. As a result of the dense tree cover, the forest is always wet during the rains and in the dry weather some weeks elapse before the damp disappears.

From our commercial point of view the forest is perhaps not of outstanding value, but it is first class natural cover and an ideal home for the Dorobo who do not judge trees by their value as marketable timber. Of the many kinds of tree in the forest, the following have been identified:

Cerwet, ficus sp.
Kelet, acocanthera Schimperi.
Kipaspust, tilia sp.
Lemetiyust, ximenia americana.
Mindetiyust, polygonum senegalense.
Mukuptet, dracaena sp.
Olkemiyuit, olea chrysophylla.
Orwust, ficus sp.
Pwust, Dombeya sp.
Rawudat, euphorbia candelabrum.
Saptet, podocarpus sp.
Sawwiet, mimusops emarte.
Sewutwet, cassia didymobotrya.
Seutwet, acacia robusta.
Sopeitit, ficus sp.
Sowiyat, arundinaria alpina.
Test, juniperus procera.

When the Dorobo lived in the forest, their homesteads were reached by narrow and hardly discernable paths through the undergrowth; nowadays some of these paths are still used as approaches to honey-barrels and game traps. The forest can be traversed by two tracks only, one running from Kipkoreon to Soweiyo, the other parallel to it from Kipaboa to Soweiyo. These being the only through tracks, people going to Timboroa have to go along either the northern or the southern edge of the forest.

[8] The farms are extensive, and only their lower parts are actually occupied and worked, so that in actual fact there is an interval of 1-2 miles between the Dorobo and all signs of European activity.

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The Dorobo divide the year into two parts, *Muaiswek*, the dry season, when they used to go hunting the bigger game with bow and arrow; and *Iwet*, the wet season, when they set traps. Each season covers roughly half the year, the rain beginning to tail off in September and getting less and less till January, and then starting to work up again in March, reaching its peak about May; so that *Muaiswek* comprises our months of October to March, and *Iwet*, April to September. The Dorobo have twelve months, all but two having the same names as the Nandi months, but they do not synchronise[*]:

Dorobo names:	Nandi names:		
Kipirirus	*Kipsondet*	October	
Kipsondet	*Kipsondet oiss*	November	
Kipsondet ale	*Mulkul*	December	Muaiswek
Mulkul	*Ngotiotet* *	January	
Ngotiotet *	*Kiptamo*	February	
Kiptamo	*Iwet kut*	March	
Iwet kut	*Wakat*	April	
Wakat	*Ngei* *	May	
Mamut	*Rop tui*	June	Iwet
Rop tui	*Puret*	July	
Puretio	*Epesu*	August	
Yepsut	*Mulkul oiss*	September	

The average rainfall at Kapchorua Farm, about two miles below the edge of the forest for the years 1929 to 1937 was 54.09 inches, the maximum being 66.17, the minimum 39.01. Details are given in the Appendix. In the forest itself I think the rainfall is undoubtedly a little higher, perhaps amounting to another 2-3 ins. in the course of an average year.

The Dorobo seem to have a better weather sense than the Nandi, and I found that they were generally accurate when making a forecast, whereas the Nandi are usually wrong when they try to foretell the weather. This weather sense is perhaps one of the reasons for their reputation among other tribes as rainmakers; for these Dorobo not only say that they have no rainmakers, but I could find no trace whatever of rainmaking activities, nor any hint that they ever had any. Climatic conditions are such, however, that in a hunting economy rainmaking is not a necessity.

The environment of the Dorobo provides them with food, skins, wood, and other vegetable materials. Iron they had not, and they still have no knowledge of ironworking, though they use iron implements. Their activities comprised hunting, trapping, food-gathering, hut-building, the production of honey, and the making of objects of wood, leather, and grass, such as traps, arrow-shafts, bows, honey-barrels, clothing, caps, baskets, and handles for tools. Objects of iron they have got for as far back as they can remember from the Nandi by exchange for such things as they can make or produce themselves.

* Throughout this paper I have written the velar nasal by the sign ŋ, representing the "long-tailed n". In words marked * the first consonant is the velar nasal.

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The economic unit is the family, of whatever kind, elementary or 592
domestic, living alone or within a group. The unit formed of a man, his wife, 594
and their children can actually provide itself, under normal conditions, with
most of its necessary subsistence, with a certain amount of help from those
to whom they are entitled to turn for it. The first necessity is of course food.
This is of two kinds, meat and vegetable, and the second sort is now both 262
wild and cultivated, though formerly the Dorobo ate but little in the way of
cereals; restrictions on hunting have now forced them to do so. In the old [224]
days meat and honey were the principal foods, vegetables being eaten as a
relish. The foods now eaten may be classed under the following heads in
order of traditional importance:

1. Meat: got by hunting and trapping.
2. Honey: from their honey-barrels.
3. Wild plants: collected.
4. Salt: made or bought. [263]
5. Drink: made from honey.
6. Cereals: *eleusine* and *maize*, grown; *maize*, bought.
7. Milk: for those who have cows.

Almost any kind of meat, except that of scavengers like jackal, hyaena, mongoose, etc., was and still is eaten, including antelopes, monkeys, and bigger game. Of antelopes they eat the following:

*Ngoswoyet**, the common duiker (*cephalophus Grimmi*).
Kipurkeut, the blue duiker (*C. aequatorialis*).
Mindat, the red duiker (*C. [illegible]*).
Irukutet, the reedbuck (*Cervicapra arundinum*).
Kwepiet, the oribi (*Ourebia montana*).
Kipsumwet, the waterbuck (*Cobus ellipsiprymnus*).

Of monkeys they eat:

Saiwa, the colobus (*Colobus guereza*).
Tiwiet, Sykes' monkey (*Cercopithecus albogularis*).
Cawwet, grey monkey (*C. griseo-viridis*).
Kwenkwet, the baboon (*Papio cynocephalus*).

And of other animals they eat:

Tawat, the wild pig or wart-hog (*Phacochoerus aethiopicus*).
Tumia, the giant pig (*Hylochoerus Meinertzhageni*).
Mulilit, the leopard.
Nowbit, the lion.
Soiat, the buffalo.
Paliet, the elephant.

There are, however, no elephant in the Dorobo country to-day, nor [184]
have there been within living Dorobo memory; but buffalo still occur in the

eastern part of the area and towards Londiani. Monkeys and pigs are found both in and outside the forest; leopards live on the edge, and lions are still occasionally met with in the open country near the forest. Antelopes are still found, but they are not so plentiful as they used to be.

Honey is produced in honey-barrels. This constitutes a special department of Dorobo life, and will be described in § 2 below.

Wild vegetable foods which grow in and round the forest are eaten both cooked and raw as relishes or additions to the staple diet of meat and cereals; the task of collecting vegetable food is usually performed by the women. Recorded wild foods eaten are:

Fruit of the *ainoiñ*, which are something like white currants, dried in the sun and eaten raw.
Fruit of the plant *mamweyet*, rubus rigidus.
Fruit of the *lemeiyuat*, ximenia americana.
Fruit of the *sesuriat*, Musa ensete, the wild banana.
Leaves of the *ainet*, girardinia condensata, nettle.
Sap of the wild banana, eaten in place of what the Nandi call *kimiet* or 'porridge'.

Banana sap is collected by sticking a flat piece of wood into an incision made in the stem of the tree; a receptacle is hung on the end of the wood and left there for the sap to drip into it. The fruit of the wild banana (a very poor substitute for the cultivated kind) is placed on the drying tray (*saiuat*) [illegible] is in very hard. Tobacco is bought from the Nandi.

Before trade salt was obtainable through the Nandi, the Dorobo made a substitute from the leaves of the *sipsyapat* bush (*pamilia integrifolia*), or of the *sawagiat* tree. Leaves were burned, and the ashes collected in a suitable receptacle, a little water was poured on them and mixed, and the resulting liquid was added to food as needed. Some of the Bantu Kavirondo used to make a similar substitute for salt.

Intoxicating drink is chiefly made of honey, though now a little alcoholic beer is made in the Nandi manner. The Dorobo method of making *kipkirirsik ne kwonik ap lo*, "honey-wine", is as follows. As a fermenting agent, the seed-pods of the ostinaut tree (*kigelia aethiopica* or the sausage tree), which may be as much as a foot long and four inches thick, are boiled till quite soft when they are cut into strips and put into the honey to make it ferment. A Dorobo description of the process of making the drink is this:

Kireere ratik, kipkele saat ai kobwor;
They are taken the seed-pods, they are boiled on the fire that they may be soft.
Kiteer chuto ai kipkele kobak ee ganaiser ko
they are washed in the water that they may be hot the things which are dirty till
kipsomboneik. Kiree ai kayonsis. Kilinde tarat
they become soft. They are put in the sun that they may dry. They are put into the pot
ale saal kwonisat pur, ai kwonsuuik, kilinde ongwet
where there is the honey only, that it may become bitter, there is put the water

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kopatok. Kiinde tapot kut korurio. Pani-e ebosiek ee can si korurio 273
so-well. It-is-put-in the-loft till it-ripens. It-remains the-days many that it-may-
kut koiek maiyak. Kiie.
ripen till it-becomes the-drink. (Then) we-drink.

(Some seed-pods are boiled so that they can be split; they are washed in the river to remove any dirt sticking to them, and then when they have become quite soft, they are put in the sun to dry. The dried strips are next put into a pot containing honey and nothing else, to make it bitter, i. e. to ferment it, and some water is added. The mixture is put in the loft to ferment. It is left for several days till it is ready and can be drunk. Then we drink it.) Another drink called *lokomek*, or honey-and-water, is also a favourite of the Dorobo; it is not intoxicating and is much simpler to prepare than honey-wine, being simply honey and water mixed together, without the addition of seed-pods, and drunk the same day without any fermentation. 272

In the old days, the Dorobo say, they were seldom absolutely without food, for meat could generally be got with either bow or trap, and unless a man was ill or away, when someone would help his family with food, he could usually get enough to feed them. This is probably true, for in those days game was plentiful enough, and there were no Europeans to restrict their hunting activities. Nowadays, when hunting is curtailed, and reduced to little more than trapping, there is an uncertainty about the food supply which even the introduction of agriculture and the nearness of European farms does not altogether remove. A man may be just unlucky with his trapping: European influence, as "harmful magic", is blamed for this; and his crop may be a small one as much through [illegible] and although one member of a family may even be a wage-earner on a neighbouring farm and get a daily ration of 2 lbs. of maize meal when he works, he has to feed not only himself but his own family and perhaps others. For instance, a man of my acquaintance named Arap Keter had to feed his wife, his child, his sister, and his mother, as well as himself. Arap Ruto, one of his neighbours, who also worked on a farm, had at times to feed his brother Arap Minio, his wife, his four children, and his mother. Two pounds of meal a day do not go far to eke out a small crop and the produce of the traps and honey-barrels when divided among eight people in a bad season. Shortages are remedied as far as possible by the principle of sharing, and a man who has food left over after feeding his own family must, and does, help to feed certain others if need be. Arap Ruto, as we have just seen, has had to feed seven people besides himself at times; but in the past the normal rule of food distribution was that a man provided meat for his wife and children, for his parents, and sometimes his wife's parents, since the old people, as always, depend on what their sons and sons-in-law can give them. A successful hunter also shared his kill with those who went with him and were unlucky. The distribution of meat was thus as follows:

262 224 177 262 464 466 693 476 224 476 888

Hunter
1. Own family.
2. Own parents.
3. Wife's parents.
4. Fellow hunters.

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224 476 In a settlement or clearing inhabited by several people, meat would be shared in a definite way:

I	Or	II	Or	III
A a man		A a man		A a man
B his father		B his brother		B a clansman
C his brother		C a clansman		C a clansman

A supplies B first, then C if C has no food; but before anybody else is given meat, A must give some to his father or father-in-law if they are within reach. Vegetable food, being accessible to all, is not shared.

462 There is a clear division of essential work between the sexes. Everything connected with hunting, bees, and weapons is done by men; women do the domestic work and other things of that nature. The more important normal occupations are divided thus:

Men:	Women:
1. Making fire.	Building houses.
2. Hunting.	Collecting vegetable food.
3. Trapping.	Getting water and firewood.
4. Putting meat on to cook.	Looking after meat cooking.
5. Making honey-barrels.	Collecting other foods.
6. Collecting honey.	Milking (if cattle are owned).
7. Making weapons.	Making baskets.
8. Exchange with the Nandi.	Preparing skins.
9. Getting coloured earth.	Making clothes, etc.
10. Cutting wood for uses other than firewood and building.	Care of the children.
11. Making fences.	Sweeping huts, etc.
12. Preliminary heavy work in the shamba [1].	Cultivation — all [illegible].

[857] Children of both sexes help in weeding and herding livestock; girls help with the housework and milking cows; boys milk till they are circumcised.

In the list above, the sex-division is followed strictly with regard to the first nine items of men's work; in the last three there is a certain amount of overlapping. Of women's work, basket-making, the preparation of skins, and making clothes are strictly confined to women, but the essential household work of preparing and cooking food, sweeping, and cultivation is often done by men, especially when they live alone in the state of monosis; such [438] men get baskets and suchlike from women in exchange for meat and food. House-building, including cutting and carrying the wood and roof-material, is all done by women, unless a man is living alone, or has to build a new hut at a time when his wife is for some reason away; Arap Minin, for instance, had to build a new hut when his wife was ill, and in consequence had to do

[1] Swahili for a piece of cultivated ground, and widely used by Europeans.

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it himself; but this was regarded as unusual in the case of a married man with a comparatively young wife (his wife Cepkumuren was at that time about 25).

While the sexes within the horde are interdependent, the horde as a whole is dependent on the outside world as represented by the Nandi. Not only do some Dorobo now actually live with Nandi, but they depend on them entirely for all their articles of iron, without which they cannot hunt. Socially, however, symbiosis is increasing. Sometimes unattached old men like Arap Cepsuku, who was about 70 at the time of my visit, live in huts occupied by Nandi: Arap Cepsuku himself was then living with an old woman at Kipkorom, sharing her hut, and growing a little eleusine at one end of her shamba, but merely as a lodger, having no sexual relations with her, for which both were too old. As he was a poor old man, she fed him and looked after him for nothing. This is true symbiosis, as the late Dr. SELIGMAN called it, and the principle is greatly extended by the Dorobo. For, whatever may be the collective attitude of Nandi to Dorobo, and of Dorobo to Nandi, the Dorobo depend on the Nandi for certain essentials, and the Nandi look to the Dorobo for certain things which they can get most easily from them. To the Dorobo, the Nandi, in the shape of the Nandi blacksmith, is indispensable, and the good will of the Nandi people is equally essential if they are to make use of his services.

The Dorobo do not specialize. Every man learns to make all the things he needs for bee-keeping and hunting (except those made of iron); every women learns to make baskets and prepare skins. The raw materials exist close at hand, and may be grouped under 5 heads:

(A) Wood: used for huts, implements, honey-barrels, traps, fuel.
(B) Plant material: used for food, medicine, salt, baskets, and tinder.
(C) Skins and other animal products: used for clothing, bags, roofs, etc.; dung, used to a limited extent for plastering walls.
(D) Earth and stone: coloured earth for painting; granite for grindstones; earth for plastering walls.

(A) Wood. The following trees are used for making weapons, utensils, etc.:

Kuriot (teclea sp.): bows; house-building; honey-barrels.
Masaita: arrow-shafts; firewood.
Koromandet: arrow-shafts.
Sosoiyut (bamboo): arrow-shafts; internodes used as water jars.
Ketuyuwet: traps.
Kimoluet (vangueria edulis): traps.
Keliot (acocanthera Schimperi): arrow-poison.
Lepekuet (dracaena sp.): house-building; honey-barrels.
Kipseputet (tilia sp.): house-building; honey-barrels.
Marorta: house-building; honey-barrels; fire-wood.
Sasuriet (wild banana, musa ensete): house-building; honey-barrels.
Tenetuet: honey-barrels; fire-wood.
Poroet (liana): traps; honey-barrels; house-building; any purpose for which rope is required.

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313 *Rerendet* (euphorbia candelabrum) : honey-barrels.
824 *Mocet:* honey-barrels.
Ollamiyoit or *Yemdit* (olive, olea chrysophylla) : fire-wood.
Enyasiek: fire-wood.
Cornet (ficus sp.) : fire-sticks.
Teet (cedar, juniperus procera) : fire-sticks.

824 (B) Plant material. The following trees and plants provide material for food, salt, medicines, and utensils*:

[372] *Sasiat* (dry grass) : tinder for making fire with fire-sticks.
[285] † *Tapararict:* fibre for baskets.
Sosiot (phoenix reclinata palm) : fibre for baskets.
[278] † *Tiinet:* medicine.
† *Opeito:* medicine.
Rerendet: medicine.
Lepuyuwet: medicine.
Sitotuet: medicine.
Seketet: medicine.
Usuet (ardisia sp.) : medicine.
[263] *Tepenguet* (aemilia integrifolia) : salt.
Serenguet: salt.
[273] *Rotinuet* or *Rotiot* (kigelia aethiopica) : making honey-wine.

825 (C) Skins and animal products. These include :

237 † Monkey : food ; clothing.
[291] † Antelope : food ; clothing ; bags ; quivers.
[411] Pig-gut : bow-strings.
Feathers : arrows.
† Honey : food ; wine ; ritual purposes.
Ram's fat : ritual purposes.
[583] Goats : bride-payment ; ritual purposes.
Cattle : bride-payment ; milk ; dung ; hides.
[412] Bush-buck : tails for brooms.

285 The basket most commonly made by the Dorobo is the small *kerepet*, about 6 inches deep and 6 ½ inches wide at the top. This kind of basket is used a good deal by the Dorobo themselves, and is also a frequent article [439] of sale or exchange to the Nandi : *kinapci kereponik Nandi*, "we make baskets [461] for the Nandi", as an old woman said. Dorobo women make baskets when they have nothing particular to do, just as European women knit. The materials used are fibre from the midrib of the *sosiot* palm, which is split into thin strips, and bast from a plant called *tapararict* which is used for sewing the coils of fibre with the aid of a small needle (Fig. 1)[2/4]. The basket maker starts by splitting the *sosiot* fibre, preparing a certain length and biting it off as she

[439] * Things marked with a dagger † are used in the preparation of objects given to the Nandi in exchange for their products.

2/4 [i.e. see category 116 & 617 - ANALYST.]

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wants it, i. e. as the loose end gets thin, a new end is shoved under the binding; the bast is kept handy in a bundle. The technique is a spiral foundation with a flat, then gradually ascending coil, of the simple over-sewn type, and bee-skep variety, the stitches being spaced out and not close together. The base of the basket is formed of six fibre coils, sewn together with bast. A hole is made with the needle, and the bast is pushed through it. At frequent intervals the fibre and the bast are moistened with the lips. After the first six coils, a slight rise is made: as each coil makes a complete circle it is slightly raised in order to make the bend between the base and the sides. When a new piece of bast is needed it is shoved right through the hole, leaving about ½ to 1 inch on the other side, and is sewn through as before. The basket maker works with lengths of bast of 6 to 12 inches. The fibre coil is of about the thickness of a pencil, and this must be maintained. When the length of fibre is reduced to about 2 ft. it begins to get thin, and some new strips must be added by chewing off a further length. The structure of the basket is thus, in effect, a continuous coil of compressed fibre, each line of coil tied to the next by stitches of bast. Sometimes the base is made of a circular piece of leather, to which the first coil is sewn, the rest of the procedure being the same as for the all-fibre basket. 285

The dressing of skins, including those used for exchange, is a simple process, for no chemical agent is applied. The newly flayed skin is tightly pegged out on the ground while it is still wet and left to dry in the sun. When dry, it becomes stiff, and in this state it is rubbed with an axe-blade held at an angle of about 20°, the blade being rubbed backwards and forwards till the skin is soft and supple. If it is to be used for a woman's garment or other object in which fur is not needed, both sides are rubbed. Skins are dressed by women. Apart from clothing, the chief objects made of skin are bags, quivers, and parts of tobacco-boxes. The material used for sewing is generally pig-gut. The needle of course has no eye, and the method of sewing is therefore to make a hole with the needle and then push the gut through it. Bags, *motoket*, are used for many purposes, including the carrying of honey and coloured earth. They are generally made of antelope skin (e. g. blue duiker), and unless intended for honey the fur is left on the outside. They are provided with a flap, a strap for fastening and a sling for carrying them from the shoulder. A common size is 7 ins. by 6 ½ ins., but I have seen them as big as 18 ins. by 16 ins. Tobacco-boxes are made from internodes of bamboo, but they have leather covers at each end, and a thin leather strap is sewn to the covers so that the owner can sling the box round his neck. 281 [462] [415] [283] [412] 415 [825] [276]

The nature of Dorobo life demands exchange of products with the Nandi. The most important of the products they get by exchange is ironwork; other things are pottery, beads, tobacco, cereal seeds, and cattle, and a fairly definite, though possibly fluctuating, scale of exchange values has come into existence. In 1939 some of these values were: 434 435

1 axe for 1 bagful of honey.
1 arrowhead for a gourd full of honey.
2 knives for 1 day's weeding in the blacksmith's shamba.

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435 1 bundle of tobacco (about 1 lb.) for 1 bagful of honey.
1 large earthenware pot for 1 large prepared antelope skin.
1 small earthenware pot for 1 small prepared antelope skin.
2 baskets of cereal seed for 1 basket (*kerepet*).
1/- worth of trade beads for 1 gourd full of honey.

[804] The bag used as a measure for honey is the smaller size of *kerepet*, measuring 7 or 8 ins. by 6 ½ or 7 ins. The gourd is about 10 ins. long. The large pot stands about 20 ins. high, the small, about 10 ins., and the large antelope skin is usually a bushbuck, the small one a duiker.

437 There are no special market places or places of exchange. The Dorobo
434 go to the nearest smith or potter and make a bargain, returning later with
[443] the exchange equivalent to collect the goods. There is no language difficulty
[197] in these transactions, for the Dorobo language is no more than an easily understood dialect of Nandi. Getting iron or pottery means going into the Reserve, but to get seeds, tobacco or beads they need only go to the nearest friendly Nandi who has what they want and is willing to make the exchange. Sometimes plant material of medicinal value (i. e. what they think is medicinal value) is substituted for some of the regular exchange articles, but the above list represents the ordinary practice. When Dorobo have money with which to buy what they want instead of exchanging goods, they have the choice of going to the shops at either Songhor in the south, or else at Aruos in the Nandi Reserve, where there is a collection of Indian shops. The men do not
[562] like their womenfolk to go to these places unescorted, but occasionally some of the bolder ones try to slip away unobserved to Aruos ; they seldom go to Songhor, as it is in the European area.

476 No human group can exist without some form of co-operation, and even when a man lives alone, as he may have to among the Dorobo, he is not because of that cut off from or unable to share in the activities of his horde. Within the family people are interdependent, and in the settlement they help each other. The main activities in which people normally co-operate are four in number : 1. House-building ; 2. Hunting ; 3. Digging earth ; 4. Cultivation.
[462] (1) Building huts is women's work, which a man will do if he has no wife, and
[224] for which he will get help from a relative or clansfellow. (2) When people hunted game they usually went out in parties, and the kill was shared among
[317] them. (3) Digging earth means a journey of anything up to 16 miles round the edge of the forest and into country where nowadays there are strangers, so people find it both safer and more convenient to go in parties, for though they are in no danger of being attacked, their unconquerable shyness demands numbers to give
[241] confidence. (4) In a family or clan group, though each individual has his own shamba, he will expect both to help and to be helped by the other members.

[276] Together with the spirit of co-operation is the rule of joint consumption. We have already seen how meat is shared according to definite rules ; and among the Dorobo certain other things which are hard to come by must also be shared. The chief of these is tobacco, of which when a man has acquired even a small supply, he is supposed to give some to his father, to his wife's

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father (if he lives nearby), to his brothers, and lastly, if there is any over, to his clansmen in the settlement; so that a man who gets a pound or so of Nandi tobacco does not keep much of it for himself.

Drink, mainly in the form of honey-wine, is prepared not so much for private consumption as for social gatherings. It is used in various magico-religious performances, and as part of the bride-payment. When a man is visited by a friend or two, he gives them honey-wine; when there is a clan council, honey-wine is drunk; and when men and women meet for a wedding or a naming they drink honey-wine. It is thus an indispensable part of Dorobo social life. When a man wants to relax, he lies down and goes to sleep; but his amusement is composed of social gatherings. Visiting, ceremonials, and clan councils in fact provide him with his entertainment, and conversation and gossip seem to take the place of games and dances. I saw no sign whatever of the game called *kewiek* by the Nandi, which is played with seeds or pebbles in holes in the ground or in a board, and never heard it mentioned. I neither saw nor heard of a dance, and I never once heard a Dorobo of either sex singing.

The principal standard of wealth is really a man's skill as trapper, hunter, and bee-keeper. But the products of this skill are perishable, and formerly the only way in which tangible wealth could be accumulated was in the form of weapons, honey-barrels, and dogs. Now that the old hunting conditions have gone, it is becoming possible for a man to accumulate wealth to a very limited extent in cattle or goats, which he can get by purchase, gift-exchange, or through bride-payment. The use of money has just become familiar, and a certain number of Dorobo earn wages; but except for one or two who have joined the Police, wages are not high, and the average in 1939 was 7 to 10 shillings a month. So far the Dorobo have had little inducement to work for wages, except that by signing on as squatters for a small wage they can acquire a temporary right to live on what was their own land. Beyond the fact that money enables them to buy a little extra food, our idea of wealth means little or nothing to them, and they have not yet advanced far enough into the transitional stage for it to be anything more than a small supplement to their traditional way of living. It is all that they can do to maintain themselves, let alone accumulate reserves or surplus wealth.

The transitional stage which the Dorobo had reached by 1939 is that from hunting to agriculture, with at the same time a strong desire to acquire cattle. It is sometimes suggested that hunting peoples like the Dorobo are really agriculturalists or pastoralists who have had to give up their agricultural or pastoral way of life and take to hunting. This may be true of some, such as the 'false Dorobo' in parts of Kenya who are merely outlaws and fugitives from various tribes. But it is quite clearly not true of the real Dorobo [7], like those who form the subject of this paper, who are unmistakably non-pastoral and non-agricultural. Their basic hunting tendency is shown by their character and behaviour, by their hunting techniques and skill, by

[7] Cf. my remarks in JRAI 59. 1929. p. 378.

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433 the absence of pastoral and agricultural techniques and vocabulary, by their myths, and in fact by everything about them. To-day it is true that they are becoming agriculturalists, as the following analysis of their economic activities will show:

			Past: →	Past: →	Ideal: (In most cases)
[462] [594]	Family	Men:	Trapping game in the forest		
			Making weapons, honey-barrels, etc.	Cultivation of shambas	
			Some: working for wages		
		Women:	Preparing the results of trapping		Stock
			Making baskets, skin clothes, etc.	Cultivation of shambas	
			Housework and food collecting		
[857]		Children:	Weeding		
			Herding		
			Housework		
[462]	Men Living Alone:		Trapping Making things Preparing the results of trapping Cooking, housework	Cultivation of shambas	Stock

[556] Dorobo life therefore converges on cultivation, with a hunting background, and stock in view as the ultimate achievement. For though the hunting instinct is still very much alive, and though a great deal of time is now spent on cultivation, there is no doubt that the Dorobo (in 1939 at least) had a livestock economy in their minds as the ultimate goal.

2. Economic Activities

a) Bee-keeping

262 [778] [231] 264 Honey is to the Dorobo what milk is to the Nandi. It is semi-sacred and has a high ritual value, in consequence of which certain rules must be observed lest the supply fail. A person must not eat fruit or blood on the same day that he has eaten honey, though he or she may eat meat. After eating honey, bits of the comb must not be left lying on the ground, but must be hidden in the undergrowth. Arap Minio said, somewhat unconvincingly, that the reason for this was "that other people shall not see them and so be led to your honey-barrel". But this is probably not the true reason, which may be [789] either simply respect to the honey, from a fear that if treated disrespectfully the supply will fail; or else fear of a witch putting a spell on the bees or honey

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through the piece of comb. After eating honey a Dorobo wipes his hands in the earth to clean them; whereas a Nandi uses leaves.

One of the accusations often made against the Dorobo as forest dwellers is that by burning grass and firing trees when taking honey they cause forest fires. Apart from the fact that there is no evidence to support this allegation, for the Dorobo do not burn trees, a very good reason why they do not destroy them was given by a Dorobo who said, with reference to some people in his settlement,

Kopel lakok ap Kapkolelac susuek ap timdannyon. Mahicome
They-burn the-children of Kolelac-family the-grass of forest-our. We-do-not-like (it)
amu mepele Okiek timdo ne tinye tukuk ca kiome,
for they-do-not-burn the-Dorobo the-forest which it-contains the-things which we-eat,
ngui ne mii pasanet ap sekemik: ngui hololio taptet ne
also where there-is the-honey-barrel of the-bees; also it-is-burned the-flower which
ome sekemik.
they-eat the-bees.

(The children of the Kolelac family are in the habit of burning the grass beside our forest. We disapprove of this, for the Dorobo do not burn the forest which contains the things they eat, and where they keep their honey-barrels; moreover, grass-burning destroys the flowers from which the bees get their honey.) The Dorobo in fact love their trees, and with these very practical reasons for not destroying them, it is absurd to accuse them of what amounts to an anti-social practice among themselves. Nor did the forest itself either in 1927 or in 1939 show signs of the alleged wanton destruction by fire attributed by some to the Dorobo.

Although wild honey is to be found in hollow trees and holes in rocks, the Dorobo do not rely on such chance finds for their supply, though they will eat it if necessary. They rely on the honey which they get from their own honey-barrels.

They recognize four varieties of bee:

Sekemik, social bees, Apis mellifera, the honey-producing bees which live in hollow trees and honey-barrels.

Imeiik, solitary bees, Osmia, which live in trees and hollow stems of shrubs and make honey.

Kosomek, earth bees, Halictus, slightly larger bees which live in holes in the ground and make honey.

Kiptulonik, mason bees, Chalicodoma, which live in cells made of a sort of cement formed of earth, minute stones, and their own saliva. These are very small bees, which make only a small amount of honey, and are not found in the forest, but in Soiin below the escarpment.

The Nandi word *kulumbenik* meaning another variety of bee, is used by the Dorobo, not of bees, but of small stinging insects like mosquitoes.

The bees that provide the Dorobo with their honey are the *sekemik*, of which there are, they say, three kinds: the queen, the workers, and the drones. The queen, *kamet ap sekemik* or "the mother of the bees", is

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described as *cemmenmenswet*, i. e. narrow-waisted; she is bigger than the others, with a large head and body and no sting. The workers, called simply *sekemik*, "bees", are considered to be males [8], and the Dorobo say that all the male bees in a swarm fertilize the queen. The queen lives inside the swarm surrounded by the bees, and never goes outside it, being fed by the workers with the honey they make, and she lays her eggs in the fresh combs before any honey has been deposited in them. The workers make honey, according to the Dorobo, by eating the 'water' (*pek*) of the flowers, which they vomit into the empty combs when they return to the swarm [9]. A comb is made (or built, *tec mpokiet* = build the comb) by the mouths of the bees with the help of another substance which they get also from flowers; and from the same source they get wax (*temeniat*) which they bring in on their feet, and use to close up openings in the hive [10]. This is what the Dorobo say. The drone, on the other hand is considered to be a female which does no work and has no sting. The drones just fly about "playing", and as far as the Dorobo can see perform no useful work. They just eat up the honey and after a time the workers kill them, *kotil kätit*, "they cut their necks", so that they shall not eat the whole supply of honey [11]. Terms used to describe bees are:

Kamet = queen (lit. mother).
Sekemik = workers (sing. *sekemiat*).
Kapurenik = drones (sing. *kapuriot*).
Uarek = young bees, grubs (sing. *uaruwet*).
Olololyet = swarm.
Mpokiet, *Wamasiet* = Empty comb, either new and unused, or old.
Kipiririlit = comb full of honey.

The Dorobo seem to have no idea of the length of a bee's life, which in Europe may amount to some seven months in the case of bees born in the autumn.

Honey-barrels or hives, *pasanet*, are made of slats or of hollowed-out logs and placed in trees for the bees to swarm in. Once a swarm has entered it is considered to belong to the owner to the barrel. If it stays for a long time (the Dorobo say) it may be inherited by the owner's son; but if it should go from one man's barrel into another's, nothing is done, for though the Dorobo say that their bees get to know them, they do not claim to be able to control their movements. And if a swarm deserts a barrel, the owner just waits till another swarm comes to it. The commoner type of honey-barrel is

[8] The workers are really females whose ovaries have become modified so that they do not normally produce eggs.

[9] This is not very far short of the truth, for bees take into their crops a substance called nectar from the flowers and deposit it in the comb. By the action of their saliva, which produces a chemical change, the nectar becomes honey, and is regurgitated into the cells for storage or for feeding the grubs. (Cf. article Bee in the Encyclopaedia Britannica, ed. 11, by Prof. G. H. CARPENTER.)

[10] Wax is really secreted by special cells in the abdomen of the worker bees.

[11] Drones are in reality the males which mate with the queen. When the mating season is over and food is getting scarce, they are killed and thrown out by the workers.

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that made of hollowed-out logs. A suitable log is cut of such a length as to allow for a length of about 3 ft. 6 ins. in the finished article. Trees specially favoured for making honey-barrels are the *mocet* and *rerendet*, on account of the ease with which they can be worked; others used are the *tenetuet*, *silipcet*, *lopokuet*, *kipsepuat*, and *maroito*. The entire work of shaping and cutting is done with the axe. The log is first split into two equal halves longitudinally, which are then hollowed out, leaving sides about an inch thick. In the bottom of one half an oblong hole is cut, through which the bees can enter and the owner put his hand to take honey. Four holes are bored in the sides of each half with a red-hot boring-needle (Fig. 1), and when the two halves are put together, liana is threaded through the holes to hold them in place.

The slat barrel, not so common as the dug-out because of the difficulty of making the end-pieces, is made of strips or slats of strong bark, the *mocet* and *rerendet* trees being favourites for this purpose. The ends are formed of two solid circles of wood which have to be cut laboriously from a log and trimmed to shape. The bark slats are then put in position round the endpieces and bound together with liana, a tricky piece of work, as anyone who has had to do a similar job will realize; and to get the barrel into place in the tree also requires great care, since it easily collapses if roughly handled. A hand-hole is made in the under side, as in the dug-out type (Fig. 1, 2).

d) and *e)* Needles; *d)* for boring, *e)* for basket work.

Fig. 1. Dug-out Honey-barrel.

When a man puts up a new honey-barrel, he calls out to the bees to come and settle in it [13]. The invocation to bees has a set form, and is uttered in a rather unnatural, high-pitched tone:

Sekem, sekem, ce mii ew emotinnecu tukul, wa pusi [13] *anyun, ocololion,*
Bees, bees, who are in countries-these all, come here now, pour-in-(honey),
ocololion [14].
pour-in-(honey).

Bees do not get ill, they say, but are liable to be killed by heavy rain if they are caught in a storm while getting honey. They have also a number

[13] New swarms take off from a bee colony when it becomes congested. Young queens are allowed to develop, and the old queen leads off a swarm to find a new home.

[13] This obscure expression is said to be equivalent to *Onyon yu*, "come here".

[14] The Nandi have borrowed this formula, and altered it to *Opua ocololion temenai Sot ne lalaw*, "come ye, pour wax into the warm hut".

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[222]

Fig. 2.
Slat Honey-barrel.

of enemies, which eat either them or their eggs. Three birds in particular are said to be fond of eating bees, a small brown bird called *cephwaskon*, a small green bird called *listet*, and a small blackish-grey bird called *mutuktet*. The *kecciat* bird (cuculus indicator) cries '*tew-tew-tew*', and when it says that near a tree people know that bees are there; this is the bird which many Africans follow when they are looking for wild honey. The Dorobo regard it as an enemy of the bees because it gives away their natural hiding-places. Soldier ants (*pirecik*) eat the eggs and grubs (*narek*) in the barrels. But no steps, either practical or magical, seem to be taken to protect the bees beyond the observance of certain rules regarding the eating of honey and the disposal of the comb.

The Dorobo say that bees know their owners by the smell of their bodies, and that for this reason people are stung but little when they take honey from their own barrels. But if a stranger tries to steal honey he is not recognized and gets stung badly. People claim also to be able to recognize their own bees; for if, as they say does happen, other bees settle in the barrel along with the original swarm, they can distinguish the original bees by their colour and the part of the barrel from which they come. Whether or not this is true, does not matter very much; but there seems to be some truth in the statement that bees know their owners, for I have seen Dorobo take honey without the paraphernalia put on by a European for the purpose, and get stung but little and with no ill effects from the few stings they did receive.

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When a barrel is put in a tree in the forest, it often has to be high above the ground, since many of the trees have no branches near the ground, and to help the owner climb a sort of ladder made of a number of thin poles lashed together is tied loosely to the tree trunk with liana (Fig. 3). To put his barrel in the tree, and to take honey from it, the Dorobo has to climb this crazy ladder which looks as if it would slip or break with each movement, but somehow does not, and lasts, rather surprisingly, for quite a long time. To take honey, the Dorobo makes fire in a loose bundle of tinder. When he has got it smouldering, he takes a bunch of leaves (preferably of *kipsepuet*, tilia sp.) and putting them and the tinder inside his garment, he climbs up to the barrel. He blows the tinder till it gives out a good smoke and then holds it under the

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Fig. 3.
Diagram to show the Construction of a Ladder on a 50 ft. Tree.

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barrel so that the smoke goes inside and the bees come out. He then takes out what honey he wants, wraps it in the leaves he has brought, and descends, carefully extinguishing the tinder when he has reached the ground. Though sometimes the barrels are not more than a few feet from the ground, very often the process of taking honey means a climb of eighty feet or so with no help but the unsteady ladder already described.

Although honey has great ritual and social value, like milk to the Nandi, it cannot be said that bees take the place of cattle in the daily life of the people, for they require and receive no care beyond the provision of barrels and the due observance of the taboos concerning honey, and there is really no need to know very much about them. But as producers of honey, bees provide material for food, drink, and ritual, and they are thus of some importance. Honey, too, is a much-used medium of exchange. Without honey, Dorobo life would be vain and empty.

b) Hunting

In the past, hunting was the chief occupation of Dorobo men, and though they hunt but little now, confining their activities to trapping, they have still a "hunting outlook". The conversation of Dorobo walking through the forest sooner or later turns on the animal life around them, for as we have already noted, they have what the Nandi call *comiet*, which one might almost render 'affinity', with the beasts of the forest. The sort of talk that goes on in the forest is something like this sample, which I took down after hearing it :

A. *Keliek ap tiowik.*
The-feet of the-animals.

B. *Iro, ni poinet, punu yo, wendi yo.*
Look, this-one (is) the-bushbuck, it-comes-from over-there, it-goes over-there.
Miniw, a ma miniw misiw, tinye lakuennyi kitekin.
Small, but not small very, it-has its-child small.

A. *Cecok cuto tiowik, mii samaktannyon ; acome cepo samak.*
(They are) ours these animals, they-are-in our-forest ; I-like (the things) which-are-of forest.

B. *Ingesuwen ulinto timin, apēre mii tiond ake. Ne ni ne kuikuioti orūl?*
Let-us-look over-there (in) that-forest, perhaps there-is the-animal another. What (is) this that creeps-about inside ?

A. *Apēre tumta.*
Perhaps the-giant-pig.

B. *Weiis, asuweni metit. Inguatinye kuyanda apēre no. A mamii kuyanda.*
Yes, I-see the-head. If-I-had the-bow I-kill that-one. But there-is-not-here the-bow.

A. *Ingesuwen ole muw.*
Let-us-see where it-escapes-(to).

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224 [805] [224] The year was divided, from the hunting point of view, into the dry season and the wet season. In the wet season people did not generally go out hunting, but stayed at home and set traps to catch antelopes and the like. In the dry season they hunted all sorts of game with bow and arrow in the forest and far afield. Thus, Arap Minip told of how soon after he had been circumcised he was one of a hunting party that went into North Nandi, as far as the hills Kaptepe and Tapsakoi [18] near the modern Turbo, some forty miles from the forest, in the days when there were no Europeans there; and another Dorobo spoke of hunting monkeys as far from home as Kapiyet in North Nandi. Leopard, monkey, and pig are still plentiful. Buffalo still exist to the east, in the direction of Timboroa and Londiani, but they have not been hunted by the Dorobo in recent years, in fact, they say, not since about 1900 when the Kaplelac age were warriors. Elephant are no more, but they were found in this area, according to some old men, when the Sawe and Kipkoimet were warriors about 60 to 70 years ago. There are no lion in the forest, but the Dorobo occasionally shot them in the plains. Leopard used to be hunted by organized parties, but this practice has been discontinued for some years, though they are still attacked and killed by individuals if they get aggressive, as in February 1939, when Arap Singira got his lip torn in a leopard hunt at Sosoiyo. Sometimes traps are made for them, of wire which is picked up on the farms. But trapping leopard is not common, and the trap made by Arap Menati which caught a leopard in July 1938 was said to be exceptional. [231] Generally they prefer to hunt a leopard with dogs, as in the old days, when if one was put up by a dog and climbed a tree, the hunter came and shot it.

[185] There is really no close season, as we understand the expression. The trapping season, which did in fact give the game a respite, was not intended for that purpose, but was for the convenience of the hunters themselves, because when it is wet, the forest is difficult to go through, the undergrowth thick, and the ground muddy and slippery; though some have been known to hunt pig there in wet weather.

[411] Dorobo hunting equipment consisted of a bow, poisoned arrows, quiver, knife, and dogs. Spears have never been used by the Kipkurerek, and the spear trap reported to be found among some Dorobo does not appear ever to have been one of their methods of killing big game. For trapping, a man needs only something to cut the materials with, and, of course, his skill; if he is to make a pit-trap, he needs something to dig with.

411 [322] [239] Bows are made mainly from the *kuriot* tree (teclea sp.) and are about 5 ft. in length. A suitable piece of wood is cut and scraped with a knife-blade till it is smooth and of the right thickness. The bow-string, *inet*, is made of gut from the giant pig, *tumia*; the gut is stretched, greased and twisted till it becomes sufficiently strong and pliable for use. It is knotted to the ends of the bow an inch or so from each end: no notch is cut in the wood to receive it. Arrow-shafts are made from the *koromendet* and *masaita* trees, as well as from split bamboo; they are smoothed with a knife-blade in the same way as

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[18] Better known to Europeans as Kibolos and Kapsagol.

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the bow. Quivers are made of ox-hide. Arrow-poison is made from the bush called *keliot* (acocanthera Schimperi), the use of which the Nandi say was discovered by the Dorobo [16]. It is made in this way: leaves and branches are broken off and boiled in a pot for several hours. The resulting liquid is strained and boiled again till it becomes thick and tar-like. When cool it is placed on a sheet of bark, covered with another piece of bark and put in a tree out of the reach of children, together with the pot in which it was boiled. After making poison a man must purify himself by bathing in a river. *Keliot* poison acts very quickly, but does not make the whole of the animal killed by it unfit to eat. The flesh round the site of entry is cut away and destroyed, and the rest is eaten with safety.

The Dorobo used to have hunting dogs (*wokto*, pl. *wokik*) which at one time were the only animals they kept. They still have dogs, but the hunting breed which I saw in the Kelpui-Kipkorom area in 1927, seems to have died out, for though I saw a few dogs there in 1939, they were nothing more than the ordinary native type, the thin-nosed cur so common in Native Reserves and on farms wherever Africans are found. The original breed, as I saw it in 1927, had, it is true, a tightly curled tail, but was a much better looking animal, of a different shape, and much fiercer, resembling the so-called '*basenji*' dog of the Belgian Congo [17] more than anything else, especially in its prick ears, tail, and carriage, though it could bark. When in the forest, the Dorobo put leather collars on their dogs, with a small bell under the throat so that they could tell where the animals were when they put up game. It was noticeable both in 1927 and 1939 that the Dorobo treated their dogs better than Africans usually do — they paid more attention to them, played with them, and fondled them.

The traps used by the Kipkurerek are of two kinds: the pit-trap, and the springe. The pit-trap, *nguret*, is simply an oblong pit about 6 to 8 ft. long, 3 ft. wide, and 6 ft. deep, dug with digging-sticks, and the earth removed in bags or baskets. Wooden spikes, *kipuaiyeinat*, were often set in the bottom, and the whole was covered with thin sticks concealed by a layer of grass and leaves. The trap was dug across a path known to be used by buffalo, the animal it was chiefly intended to catch. This type is no longer used. The springe is the only trap used to-day. It is called *porost*, and can be made in a very short time by almost any Dorobo. It is used chiefly to catch smaller game like antelope. The materials required to make a springe are wood, liana, and grass, and the only tool used is an axe or *panga* (the long-bladed knife or cutlass common in Africa, and now often used by Dorobo). The trap about to be described was made for me on the edge of the forest at Kipkorom by Coimin arap Katam on 9 July 1938. It took him about 12 minutes from start to finish, and did all that was claimed for it; it should be noted that he was somewhat out of practice, and probably took a little longer than a man who was constantly making traps.

[16] Cf. Hollis, The Nandi. Oxford 1909. p. 108.

[17] Cf. Capt. G. Dollman in Journ. Roy. African Soc. 36. 1937. 148.

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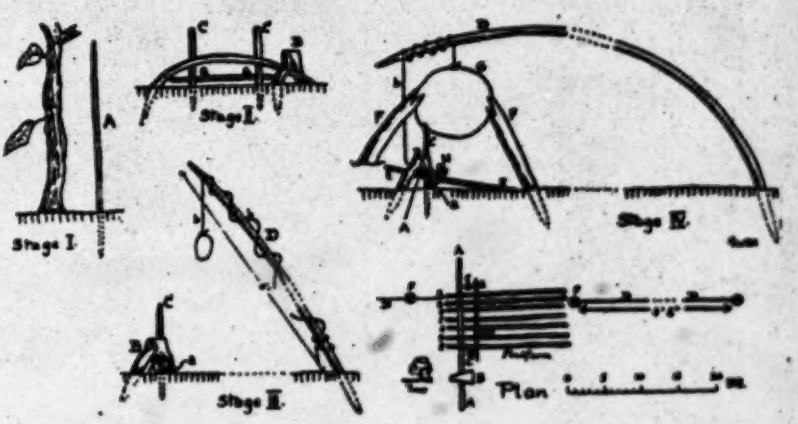

Fig. 4. Stages in the Making of a Springe.

The first step is to cut a stick, A in Fig. 4, about 21 ins. long, chop the thick end to a point, and plant it firmly in the ground in a suitable position where it is more or less concealed by bushes. The second stage is to cut a peg B, bend over the stick A and fasten it down with the peg. Two short sticks CC are then placed 8 inches apart up against A, and another stick *a* is laid on the ground beside them to form the base of the platform. A pliable stick D about 6 ft. long is then planted in the ground 5 ft. away from *a* and a piece of liana *bb* is tied to it. Next, a number of sticks, EE, about 12 ins. long, is laid at right angles to *a* resting on *a* and underneath A to form the platform. Two split sticks FF are fixed on each side of the platform to hold the noose. Stick D is bent over, the noose G is slipped into the cleft sticks, and a length of liana from the end of D is tied to peg H which is placed against A and *a*. Finally, *a* is raised off the ground, and the platform, now set for action, is covered lightly with grass and leaves to conceal it. When an animal treads on the platform, the pressure on it pushes *a* to the ground, and the lower end of peg H is thereby released, with the result that the bent end of stick D is allowed to spring up. The animal as it treads on the platform simultaneously puts its head within the noose which quickly tightens round its neck as D springs upright, and the animal is thus suspended and unable to escape. Frail as such a trap may seem, it is strong enough to catch animals and hold them till the trapper comes to see what has been caught.

The wood used for making such traps is cut from one or more of the following trees: *himoiwet* (vangueria edulis), *ceptaiyat*, *hatwyawat* (Nandi, *martit*); the liana is taken from the *ndoroktat* tree when possible. A simpler form of the same trap is shown in Fig. 5, in which there is no "trigger-peg" like H in the preceding example, but instead a short upright stick to which is attached the end of the liana; the stick is pressed back by the platform

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Fig. 5. A Simpler Kind of Springe. This trap has no "trigger-peg". The animal treads on the platform and by so doing presses it against the upright K to which liana b is attached, thus releasing the liana and allowing the bent stick D to spring upright and tighten the noose round the neck of the quarry.

when an animal treads on it, allowing the liana to slip over the top and thus release the bent stick D.

Hunting parties might be made up by as many as eight men, though I think that probably four or five was a more usual number. A common practice was for half the party to work along one bank of a stream and the rest along the other bank, so that if there was nothing on one side, those on the other side might be more successful; or if the quarry got across the stream, the men on the other side would be able to deal with it. When a kill was made, all the hunters assembled. The animal was skinned, the meat cut up, and some of it eaten on the spot, either raw, or partly cooked by laying it across a rough wooden framework over a fire. The rest of the meat was divided among them and taken home. In the best days, when meat was plentiful, what was left over was dried and kept either as a reserve or else exchanged with the Nandi for eleusine and millet. A stack of dried meat (*sirikeniot*) about 2 ft. square, was sold for about 25 lbs. of grain. Meat is cut into strips (*sir*, whence *sirikeniot*) which are laid out on the drying tray or left over the fire to be smoke-cured after being dried on the roof of a hut or in the fork of a tree.

c) Agriculture

Since they can no longer hunt, and present conditions are[18] not favourable for the acquisition of cattle on a large scale (even if the Dorobo had the means of so doing), the adoption of agriculture has become an economic necessity, and methods, implements, and seed have been obtained from the Nandi. This change from hunting to agriculture has taken place virtually between the years 1927 and 1938. In the first of these years the area cultivated by them was so small as to be negligible; but by the latter year their lives were, as we have seen, to a great deal centered on agriculture. And as with hunting in the old days, so with agriculture to-day, the growing of crops is naturally regulated by the wet and dry seasons and the main divisions of the agricultural year are:

January to April:	preparation of the land.
April-May:	planting.
September:	reaping.

[18] This refers to the years 1938-39.

6:Huntingford E-S (1938-1939) 1953 FLÁ Dorobo FLÁ

241 [221] The planting and reaping periods vary according as the rains are early or late. Between them there is a time when the crops have to be weeded, and after that for two or three months a time when little need be done to the crops but guard them against animal depredations.

The Dorobo grow two main crops, *pik* or *paint*, eleusine coracana (commonly known in Kenya as *wimbi*), a short gramineous plant bearing a head composed of small grains; and *ipandet*, maize. Millet had not been [195] adopted by 1939 as a cultivated crop, and when wanted had to be bought from the Nandi. As a subsidiary crop, sweet potatoes, *rejemnik*, are grown to a small extent.

[112] Implements are confined to the hoe (*mokowhet*), axe (*ndebet*), and [195] ordinary knife (*pawhetet* or *ratwet*), though the use of the *panga* or cutlass is spreading. Hoe-blades (made by Nandi smiths) and *pangas* (sold by traders) are got from the Nandi in exchange for baskets, honey, or skins. The bill-hook, though used by the Nandi had not been adopted by the Dorobo in 1939.

The ground is prepared in the same way as by the Nandi. The top [illegible] smouldering for several days and the burnt earth and vegetable ash are then spread over the plot and dug in with the hoe. Seed of maize and eleusine is [194] bought from any Nandi who is willing to sell it, usually one of the numerous [196] squatters on the nearby farms[*]. The Dorobo get two basketfuls in exchange for one basket. Potatoes (when not got in the same way) are generally grown by themselves, but maize and eleusine are planted together in the same plot so that the eleusine grows up between the maize plants. Maize has then to be sown wider than is really economic, but it is a Nandi habit, and in favour of it one may say that the intervening spaces are partially covered and thus there is a chance of preventing some erosion in the early stage when the ground is clean, for when the crop is a few inches high, people turn out to weed, a process repeated if the land gets very dirty.

[197] Each shamba is surrounded by a fence made of thorns and bushes, with occasional posts to strengthen it where necessary, and trees or stumps are included in the fence when they occur in suitable positions. Sometimes there is a gate formed of movable upright poles, like the gate of a Nandi cattle enclosure, but usually the line of fence is unbroken, and access is by way of a rough stile of logs laid across the thorns.

243 Eleusine is reaped in the Nandi fashion by cutting off the heads with a knife, the straw being left to be trampled down and eventually dug in — that is, if the shamba is to be planted again. Maize is picked by hand, but in 1938 it was largely eaten on the field as the cobs developed, so that by the time it was fully ripe there was not much left to reap. By 1938, however, some [191] Dorobo of Kipsikon, noticing the European practice of stooking maize to dry before it is ripe, cut and stooked their own in the same way, though they did not understand why it was done by the Europeans, whose object

[*] A Squatter is a "resident native labourer" living on a farm under contract with the employer.

4:Huntingford E-S (1938-1939) 1953 FLA Dorobo FLA

is to get as much as possible of the crop out of the way so that ploughing can start at once without having to wait till the crop is ripe. But the Dorobo had, all the same, made a step forward, for a solid, compact stook is less likely to be devastated by animals than plants standing scattered over a field.

By 20. November, 1938 the Kipsikas people had reaped their crops. The shamba here was about an acre in extent, and was divided into four approximately equal-sized plots. There was little maize, for some had been eaten on the field and some had been destroyed by vermin; what was left had been stooked, and anything like an accurate estimate was impossible, though there might have been two or perhaps three bags in the stooks. If we estimate that the equivalent of two bags might have been eaten, and two more destroyed by vermin, we have about 6 or 7 bags, a somewhat high estimate for a crop grown mixed with eleusine, but not impossible[*]. Of eleusine, one plot yielded 3 bags, and another 2 bags (that is 5 bags from half an acre), not a great deal, certainly, but a fair yield under such conditions, and most useful as food, for the Dorobo eat most of their eleusine, and turn very little of it into beer. Maize and eleusine are ground by crushing on slabs [illegible] for the children, and stiff porridge (*kimiat*) for the older people; it is generally eaten with a stew of vegetable food (*ingwek*) prepared separately.

Storage of crops is not yet a very difficult problem. A few of the Dorobo, it is true, have built granaries of Nandi type, hidden just inside the forest to prevent thefts by the Nandi, for anyone can lift up the roof of such a granary in the night. But since so much of the maize is eaten on the field, what is left at harvest time can be stored in the loft; and the same applies to eleusine, for it does not yield a large amount of grain. I saw no millet growing, and the Dorobo said they bought it from the Nandi.

As we have already noted, agricultural labour is divided to a certain extent between the sexes, but the distinction is not very sharp, and it was found to work out in the following way:

Men:	Both:	Women:
Heavy preliminary work	Digging	
Planting	Weeding	Collecting and burning weeds
	Reaping	

The heavy work includes lopping off branches in the Nandi manner, clearing bushes, and breaking up the ground when hard. Women may also plant, but the tendency seems to be for men to do it, though there is no absolute rule against women planting. Children help with the weeding, and herd the goats when there are any; old men herd cattle, and women also sometimes herd goats.

The Dorobo had not by 1939 acquired the Nandi belief that each eleusine crop requires new land, which in the circumstances is just as well; but they do not hesitate to give up using land which is unproductive. Thus,

[*] The bag is the standard 2 ½ lb. grocery bag used in East Africa, holding just less than 4 gallons.

Schwellengford B-1 (1938-1939) 1951 FLA Dorobo FLA

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[341]

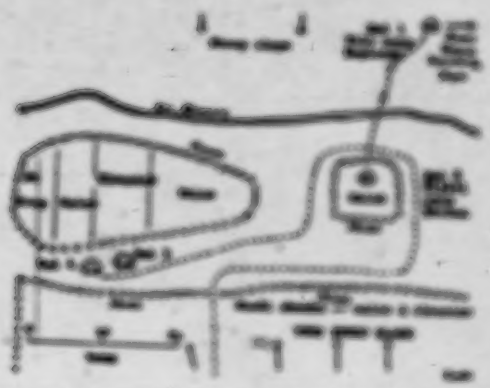

Fig. 4. Plan of a Dorobo thornbo or kitpat ainoptin a Nandi thornbo.

at Kipsbon in 1938 the crop was so much damaged by monkeys, pigs, and a sort of mole called *kwoniet*, that the original shamba had to be given up, and the occupiers took up new and separate plots elsewhere. Sometimes a Dorobo has a shamba all to himself; more often, however, several people divide the area beside a town, each contributing to the labour of making it; [248] and in some cases Dorobo share part of a looted shamba with Nandi (Fig. 4).

847 Though not connected with cultivation, we may mention here the subject of earth digging, because it is concerned with the ground. Red and white earth is found near Tinderet (or *Tawkeron*, as the Dorobo call it), and men go in parties of four or five to dig it. They use nothing but a digging [862] stick, *kwost*, made of a sharpened stake, and the earth is carried home in [923] large leather bags. In former days, when other Dorobo lived in the earth-producing area, a digging party would ask leave to dig from the man who hunted over that tract of land, and though no fee seems to have been paid, it is said that if a man should refuse his consent, the party would go home without digging. But as no Dorobo now live there, this could not be 459 verified. To-day the Dorobo sell coloured earth to the Nandi, who pay them 485 at the rate of 2 shillings for a large bag of earth. Red earth, *ombeit*, is used 503 mixed with fat (or sometimes cassava oil) for rubbing on the head; white 769 earth, *emeriet*, is used as a magical remedy in cases of homicide.

d) Cattle

251 If the Dorobo had not been in such close contact with a people whose 277 primary interest in life was cattle, it is possible that they would have continued 181 themselves with agriculture and no live stock. But their relations with the Nandi have inevitably led them to take an interest in cattle, and to think that the [558] possession of cattle is a desirable thing. Therefore they are slowly trying to acquire cattle, and are in process of making them their ultimate objective. But

A.Huntingford B-5 (1926-1929) 1953 FLA Dorobo FLA

they have been stock-owners for too short a time, and as too small a scale to have formulated or developed any cattle customs of their own; they do not think (like the Nandi) in terms of cattle; and their main efforts are at present concentrated on trying to acquire cattle. For the last, three ways are open to them, all slow and laborious: bride-payment, gift exchange, and purchase.

Bride-payment. A Dorobo whose daughter is married to a Nandi receives for her the number of stock that a Nandi would give for a girl of his own tribe, i.e. 1 cow and 1 ox or bull, together with a variable number of goats; and when a Dorobo marries a Nandi woman he has to pay at the same rate. Arap Koter acquired his cattle from the marriages of his three sisters: the eldest, Kapotikany, was married while his father was still alive, and on the old man's death he inherited the cattle paid for her; the other two, Cosom and Tapsimbe were married after their father's death, and the cattle for them (amounting in the case of Tapsimbe to 1 bull, 1 cow, and 5 goats) was paid to Arap Koter.

Gift exchange. Nandi from time to time make friends with Dorobo, chiefly for the purpose of getting honey. The first move after two men have come to regard each other as friends, *cemet*, is for the Dorobo to give the Nandi some honey, without expectation of any immediate return. After a time, the Nandi gives the Dorobo a goat, and then the way is prepared for the handing over of cattle. Arap Mimo became the friend of a Nandi at Obware called Kapkilo, and eventually got from him an ox in exchange for a fat cheek; and on another occasion he got an ox in exchange for seven goats which he bought with his wages for working on a farm. Arap Koreyo in his youth hunted at Kapkyet in Nandi, and shot many monkeys, from which he made fat cheeks which he exchanged for cattle. To-day he has five head of cattle which are herded for him by a Nandi named Kipkurto arap Soyon on Farm 1070: the Nandi looks after them in return for the use of their milk, Arap Koreyo being given a small amount of it. This process of acquiring cattle is, of course, a form of purchase, but it is purchase under the peculiar conditions of forming a friendship by exchange of gifts first. The Nandi do not readily part with their cattle, and it is therefore necessary to lead up to the final stage, as the Dorobo regard it, by the preparatory exchange of other things. And as a method of acquiring cattle it is limited by the fact that the Nandi were willing to exchange only male stock in this way, so that for female stock the Dorobo have to rely on bride-payment.

Purchase. The Nandi do not sell cattle to the Dorobo except as just described, that is, in the form of bride-payment or by exchange. But they sell sell goats for cash. The Dorobo do not seem to care about sheep. In 1929 some possessed any.

By the time of their move in 1937 the Dorobo were credited officially with a large number of cattle, some 2000 head in fact. But in 1929 the actual numbers that I saw and counted (until have reason to believe that these were practically all they had) were very much smaller. The following list, while it may not be perhaps completely accurate, gives a truer idea of the real numbers. It will be noticed that there were few goats; some were undoubtedly

284 mined in the count, but they are used even to-day so much for medical and magico-religious purposes that there is a constant drain on them.

The numbers that I actually counted in the three *koroosek* of Kipkoreon, Kolpsi, and Sunaiyo were:

		Cattle:	Goats:	Dogs:
Kipkoreon:	Arap Koter (Cassoddi)	10	—	—
	Arap Mosoi	—	10	2
	Arap Korwa	5	—	—
	Arap Misio	—	5	2
	Arap Koter (Kipsoo)	5	—	—
Sunaiyo:	Arap Silindo	20	—	—
	Arap Esoi	2	—	—
	Arap Singiro	—	—	2
	Arap Cornlyo	1	—	—
	Kibon arap Sibon	05	—	—
	Kortosoi arap Menyenwa	05	—	—
	Kiptoo arap Ngomwon	—	5	—
	Kimeto arap Langat	—	10	—
	Kosio arap Ngomwon	—	4	—
Kolpsi:	Arap Matoko	5	—	—
	Nemapoi arap Yator	6	—	—
		90	36	7

5. The Economic Division of the S.W. Corner of the Forest

413 The forest is regarded by the Dorobo as their special territory. Not only is it divided between the *koroosek*, but families have rights over parts of it, and these rights pass from father to son. The place where the trees cease to an end forms a natural boundary and within that boundary was Dorobo ground where few strangers, except the occasional outlaw or fugitive, cared to penetrate. A man's forest rights included hunting, trapping, setting honey-barrels, and food-gathering. If anyone wished to do something on another man's ground, he might do so with the occupier's permission. A section of forest was not the absolute property of an individual and entitled by a pronouncement of the *koroo* council, but was held on a tenure based on the fact of hereditary occupation sanctioned by public opinion: a man's section was automatically taken over by his son and this succession was recognized by the people.

[414] The forest appeals to the Dorobo in four ways: (1) In the trees they find their homes, and they know no manner of living in which there were no trees; trees therefore go with the land, which in fact does not count as land, but as something which bears trees. The cutting down of one or two trees on a man's section is his own affair, but if people should begin to cut down many trees, public opinion would be against them: *ogot koroo Oloiel ai kotil kotil ee ore, meromo Oloiel alak*, "if a Dorobo wanted to cut down many trees, the

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

other Dorobo would not like it", in the words of one old man. (2) The animals on whose flesh they feed and with whom they themselves have something in common, live in the forest. (3) In the trees live the bees whose honey they eat and drink, a substance as valuable to them as milk to the Nandi. (4) The forest is not only the medium of their life, but their protection. And so even to-day when they can no longer live in the forest, they still think of it as their own, and the division of the parts beside which they have made their settlements is of the utmost importance to them. 423

The division of the south-west corner of the forest between Kipkoreun and Soeniyo as it was in 1939 is shown in the Map. The forest is here divided into several unequal areas, bounded on the NE side by the main through-track from Kipkoreun to Soeniyo, and crossed also by the other through-track from Kipsikwa to Soeniyo. The main track is used a good deal by the Nandi who go to see their friends and relations on the farms in the Metatitei valley; the other track is used mainly by Dorobo, and their honey-barrels and traps occur mostly along it, whereas there are none on the main track because strangers might interfere with them. [187] [231]

Between the two main tracks is the Ain ap Tinet, a stream which forms the northern boundary of the areas held by the Kapkoleloi (I), Kapeitani (II), and Kapsingira (III) families, the last of which extends eastwards towards the main track. Group № I is represented by Arap Keter, Kipsigei, and Kipsan, three brothers; № II by Arap Misia; and № III by Arap Singira. The occupiers of I and II live at Kipsikwa, and of III at Soeniyo. The Ain ap Tinet is the southern limit of the area held by the Kamuru (IV) represented by Arap Koruru who lives at Kipkoreun, his land reaching to the main track. East of the main track, area № V is held by the Kaperpenuita family represented by Arap Ceruiyo and his brother Arap Cepenuita who live at Ndoretun. Above this is area № VI, held by the Kaptokuni, represented by Kwimai who lives at Upper Soeniyo in the forest. And finally № VII is the enforcement area, occupied by the people who live at Upper Ngatopkow in the forest and Lower Ngatopkow outside it. These are a mixture of six families: Kamumetik, represented by Tatt; Kamuruu, represented by Nebai; Kaplaragan, represented by Kibaiyo; Kapkimuruai, represented by Arap Rami; Kapkipsan, represented by Kipiwo; and Kapkoilel, represented by Sulle*. These holdings are clan areas as well (except in the case of № VII where four clans are represented, and the division could not be satisfactorily traced):

I. Family Kapkoleloi	Clan Mol.
II. Family Kapeitani	
IV. Family Kamuru	
III. Family Kapsingira	Clan Kipsikwa.
V. Family Kaperpenuita	Clan Kipsomai.
VI. Kaptokuni	Clan Kapsokol.

* The genke *kap-*, besides meaning "place of", also means "family of", and is added to the name of a principal recent ancestor, who may be a woman, e.g. *Kapsokwai* = named from *Sokwai* the wife of Arap Misia's father's father. 429 n1

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

It will be seen from the map that honey-barrels and traps are the main forest activities, the shambas being outside the limit of the trees.

The Dorobo had developed a habit of saying that there were no honey-barrels in the forest. Certainly this would seem to be true to anyone who goes through the forest along the main track from Kipkorom, for there one sees no sign of any activity at all. But on the other track, where few but Dorobo go, there are plenty of them, especially in Area I where Arap and his brothers are very active, several of the barrels near the path belonging to his unmarried half-brother Kipungei. In Area II there are not so many, because Arap Minio regards himself as an old man by now, and unable to work much (he is actually — in 1939 — about 40); his brother Arap Ruto works on a farm and is less active in the forest than Kipungei. But Arap Minio has at least two honey-barrels, which he showed me, as well as a trap in which not long before he had caught a bushbuck. A few paths branching off the main track which had once led to traps could still be distinguished, though they were not used in 1939. In Area III there was a new path leading to a trap made by Arap Singira some way from the track. In Areas VI and VII some of the people still live in the forest in the old type of Dorobo hut, the *kwongat*.

Now these areas are not very extensive. The space of forest occupied by Areas I-IV is perhaps not more than six square miles or thereabouts, and that of Areas V and VI may not be more than four square miles. But a mile on the map is a very different thing from a mile on the ground in an African forest. The Dorobo have been forced by economic pressure to concentrate; and since the adoption, even on a small scale, of agriculture, the dependence on hunting has naturally been reduced. In addition to each forest area must be reckoned the strip of open land where they live, cultivate their little shambas, and herd their few livestock. Moreover the central and unoccupied part of the forest is open to anyone who chooses to hunt there, though there were no indications in 1939 that they actually did so. In the old days the forest areas may have been larger, though when all the *kwongat* were occupied there cannot have been very much difference in size. But a relatively small area is enough for bee-keeping, trapping, and food-gathering, and it must be remembered that in the past, before the forest people's economy was disturbed, they ranged much further afield to hunt with bow and arrow than is possible to-day, and the forest was primarily regarded as a trapping area. Various statements leave no doubt that the Dorobo used to hunt right over Nandi and Uasin Gishu, as well as in the high country east of Timboroa. Thus, though their own territory was limited in extent, their dry weather range was wide, and the supply of game more than adequate to their needs [1].

[1] This paper deals with conditions that existed up to 1940; the use of the present tense must be taken as referring to that period.

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

Appendix

Rainfall at Kapchorua Estate for Nine Years

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	1929	1930	1931	1932	1933	1934	1935	1936	1937	Average
Jan.	0.00	4.12	0.89	0.55	1.58	0.01	0.00	0.00	0.00	1.43 [35]
Feb.	0.05	1.97	0.80	1.56	0.51	0.34	0.00	0.00	0.00	0.87
Mar.	1.86	9.42	7.89	8.00	0.12	2.33	0.98	8.78	6.35	5.03
Apr.	9.54	15.57	7.16	5.35	0.91	5.22	5.61	12.25	13.13	8.30
May	9.47	7.65	10.30	12.26	2.86	10.15	12.37	4.49	9.52	8.78
Jun.	3.85	5.07	3.39	3.16	4.50	5.54	8.26	5.87	6.96	5.08
Jul.	5.83	4.02	11.34	5.53	5.32	6.19	5.04	3.11	5.92	5.81
Aug.	4.80	6.12	6.88	4.76	5.15	6.68	5.12	6.21	8.66	6.04
Sep.	2.86	3.78	8.40	8.57	2.67	3.06	5.49	4.20	1.96	4.55
Oct.	3.76	3.80	3.17	2.42	2.88	3.02	6.13	2.72	3.03	3.43
Nov.	5.63	1.66	2.29	1.44	1.22	3.47	2.02	1.40	8.87	3.11
Dec.	5.25	1.29	3.66	1.88	0.89	2.70	2.87	1.66	1.32	2.39
Inches	52.90	64.47	66.17	55.48	28.61	48.71	53.89	50.69	65.72	54.09

Explanation of the Map of the Economic Divisions of the South-West Corner of the Forest

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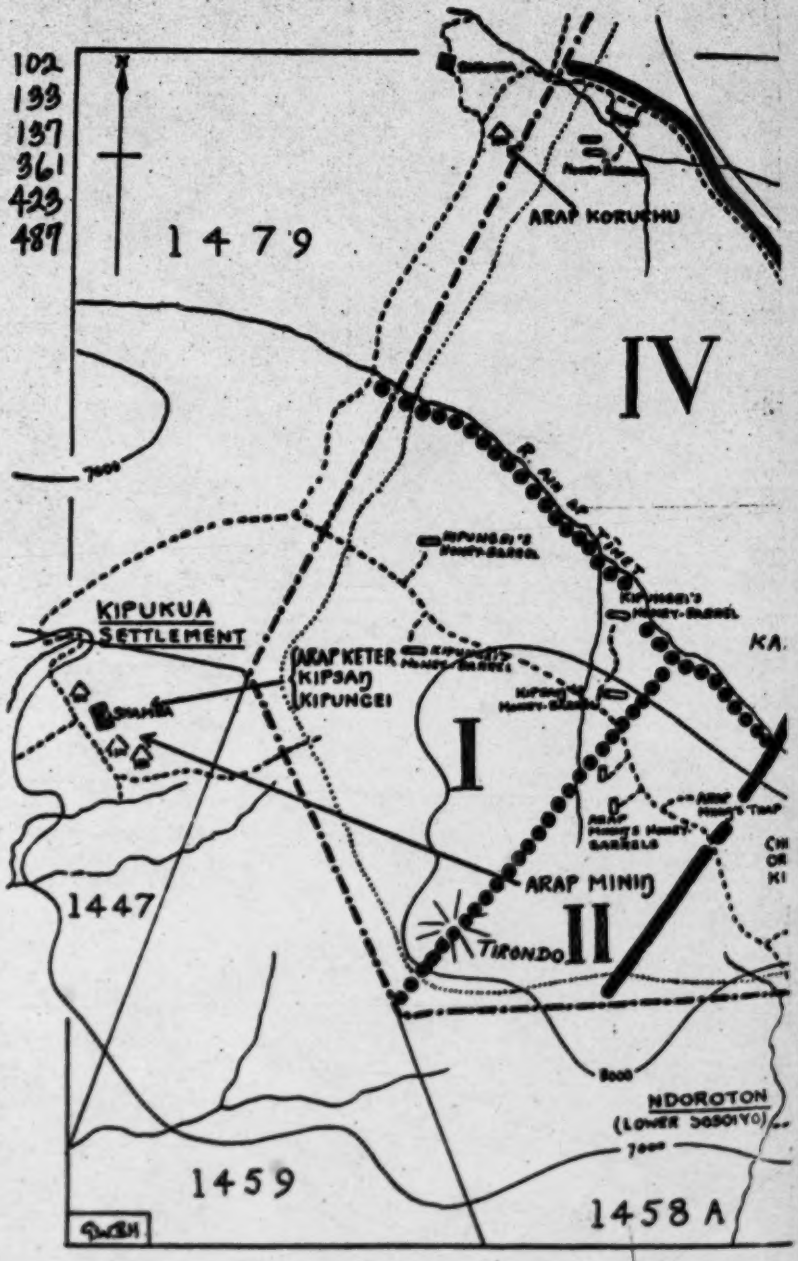
Area No:	Class:	Families:	Domicile:
I.	Moi	Kapkolelach	Kipukua
II.	Moi	Kapsituni	Kipukua
IV.	Moi	Kamuru	Between Kipukua and Kipkorom
III.	Kipieken	Kapsingira	Ndoroton
V.	Kipamui	Kapchepouaita	Ndoroton
VI.	Kapsekoi	Kaptokoni	Upper Sosoiyo
VII.	Kipieken	Kamnasutik	Upper Ngatepkon
	Kipieken	Kapkipopo	
	Kapsekoi	Kapkimancari	
	Toiyoi	Kapkuikoi	
	Kipieken	Kamnasutik [34]	Lower Ngatepkon
	Kapsekoi	Kapkorongos [34]	
	Kapil	Kamereua [34]	

[35] This high average is due to the abnormal rainfall in 1930: a more accurate average would be about 0.75 ins. I have to thank Mr. G. A. Cockman for providing these figures.

[34] These families, represented by Tote, Nekoi, and Kilanya, are not shown on the map: their area lies east of Upper Ngatepkon.

6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6



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6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

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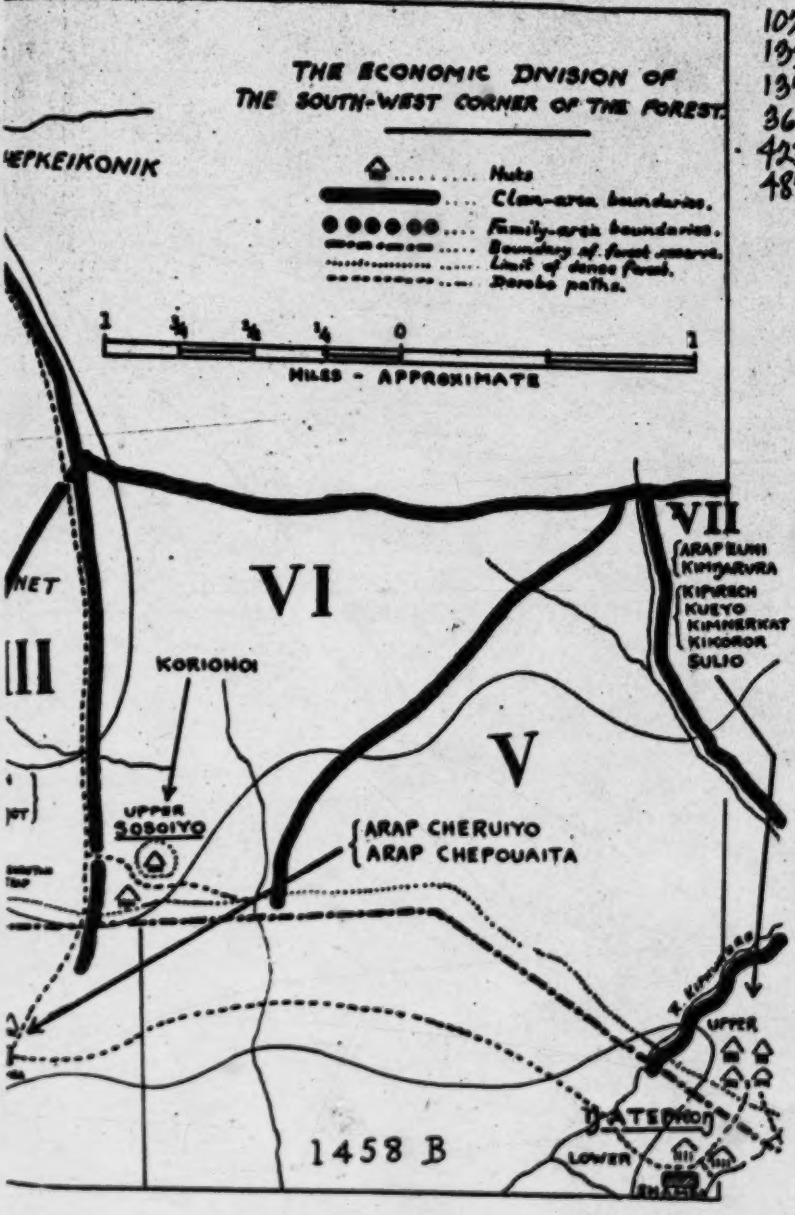

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6:Huntingford E-5 (1938-1939) 1953 FL6 Dorobo FL6

162 361 621 The people contained in these settlements in 1939 were:

Kipukua:
Arap Minin, his wife and 5 children.
Arap Ruto, his brother.
Cesikirikat, his mother.
Arap Keter, his wife and 2 children.
Kipsan, Malakuen, Kipungei } brothers of A/Keter
Cepkoiec, sister of A/Keter.
Arap Teltony, clansman.

Upper Sosoiyo: Arap Cepouaita.
Arap Ceruiyo, his brother.
Kipor, his brother.
Kipkutik, his brother.
Simotua, clansman.
Kiptanui, cousin of Arap Cepouaita.
Kesimo, brother of Kiptanui.
Kimitei, his brother.
Cepotip, his sister.
Arap Lengei, relationship not established.
Korionoi arap Munyengua, his wife and 3 children.

Ndoroton: Arap Singira.
Orinyi, his brother.
Kipkernot, his brother.
Arap Ngelil, Arap Keme } clansmen
Arap Cemualta.
Mother of last two.
Widow with 2 children.
Widow.

Isolated: Arap Korucu, alone.

Upper Ngatepkon:
Kipirec (Kipieken).
Kueyo, his brother.
Kimnerkat, clansman.
Daughter of Kimnerkat.
Kikoror (Kipieken).
Arap Euni (Kapsekoi).
Kimnarura (Kapsekoi).
Sulio arap Silimbo (Toiyoi).

Lower Ngatepkon[34]:
(1) Tote arap Nasutik, his wife and 3 children.
(2) Nekoi arap Mereua, his wife and son.
(3) Kilanya arap Korongos, his wife and 3 children.

[34] Note that (1) is Kipieken, (2) Kapil, and (3) Kapsekoi.